

IN THE SPECIFICATION

Please replace the paragraph beginning on page 8, line 8 with the following replacement paragraph:

With reference to FIG. 2, the transponder 14 includes a power subsystem comprising an antenna switch 42, passive standby circuit 46, power supply control 48 and a solar powered charge controller 50. The antenna switch 42 is shown in its normally closed position, with the antenna receiver 30 feeding the passive standby circuit 46. During periods of inactivity, the transponder 14 is essentially powered down with the receiver antenna 30 feeding the passive standby circuit 46. The passive standby circuit 46 is a tuned filter that includes a precision diode detector, a low-pass filter, and a comparator that drives the gate signal of the MOSFET power supply control 48. An RF signal at the resonant frequency causes a build-up of the low-pass filter DC output voltage until it passes the threshold and triggers the comparator to switch on the power supply. The only current drawn in the standby mode is the bias current for the precision diode detector and the current drawn by the comparator in the off state. In most embodiments this should total less than 1 milliwatt, and it may be possible to bring it down to the tens of microwatts range with the proper diode detector design. The operation of this circuit varies with the band selected for GPS tag system communications. Low sensitivity of the detection circuit may be compensated for by increasing the power of the interrogation message 32 for the wake-up portion of the waveform only.

LAW OFFICES OF
MacPherson, Kwok, Chen & Heid
LLP
1762 Technology Drive,
Suite 226
San Jose, CA 95110
TEL: (408) 392-9250
FAX: (408) 392-9261